

# **MEMOTECH**

## **Keyboard and Buffer**

**Read Me First -  
Before You Start!**

*Hello User!*

We hope you like the look of your Memotech Keyboard. This booklet will help you get the best out of it.

What you will find very quickly is that, instead of having to prod patiently at the ZX81 plastic membrane and check the character on the screen every time, the Memotech Keyboard with its light-touch positive stop keys will allow you to go faster, more accurately and more confidently.

To speed you even faster, we have added an extra key to the array: at the top right there is a SHIFT key which mimics the one at bottom left. This new key will for example enable you to operate DELETE (shown as DEL RUBOUT on our key) as a simultaneous stroke with SHIFT.

If you want to get started now, just disconnect your ZX81 power supply and plug the Memopak Keyboard Buffer into your ZX81. If you have other Memopaks they can be plugged onto the back. Reconnect the power supply and off you go!

Good luck from all at Memotech!

## **HOW IS THE MEMOTECH KEYBOARD ARRANGED?**

The ordering of the alphanumeric keys is exactly the same as the standard QWERTY typewriter layout; the keys are set at full-sized typewriter pitch and are raked and terraced to give a natural typewriter 'feel'. The terracing allows the placing of legends on the front as well as on the top of the keys.

The 'shift' mode labels (printed in red on the ZX81 membrane) are printed on the key face at the top, and the 'command' labels (like PRINT) at the bottom. The 'function' mode labels are printed on the front of the keys.

Some the inscriptions are slightly changed from those on the ZX81, and that too we think will make things a little easier and clearer for you.

## **HOW FAST CAN I GO?**

You will discover quite quickly that the limitation on your speed of program and data entry is no longer the durability of your fingertips, but neither is it the keys themselves (which are actually very fast). What you have come up against is the debounce routine within the ZX81—part of its software. If you find you are 'losing' characters at the input stage, try adopting a more even tempo of keystroking (just like a good typist).

The constraint on stroke rate will be most apparent when entering text, rather than data or program. MEMOTEXT, the new word processor pack from Memotech, incorporates software which lifts the ZX81 barrier and replaces it with a very much faster debounce routine of its own.

## **DO I NEED TO BREAK INTO MY ZX? DO I NEED TO SOLDER THINGS MYSELF? DO I NEED TO SQUEEZE MY ZX INTO ANOTHER BOX? DOES IT LIMIT WHAT ELSE I CAN ADD ON?**

No, no, no and no.

## **HOW DO I INTERPRET THE GRAPHICS SYMBOLS ON THE KEYS?**

Easy. The background colour of the keys (blue) is equivalent to the background colour of the screen (white on a TV, green on a monitor probably). What is printed on the keys is equivalent to what gets printed on the screen.

The printing on the keys is extremely durable and will not wear off, nor come off in normal use.

## **WHAT HAPPENS TO THE ZX PLASTIC MEMBRANE?**

Nothing. Plugging in the Memotech Keyboard Buffer does not disable the ZX membrane, so 2 people can interact with the ZX at the same time (gamesplayers take note).

## IS THE ORDER OF THE MEMOPAKS IMPORTANT?


Not terribly, but the 'big' Memopaks containing 16K, 32K or 64K should come last. If you've got a Memopak HRG (High Resolution Graphics), it's best to put that first, next to the ZX81. All Memopaks come with extender boards at the back, so adding on to your additions is no problem.

Keep a lookout for our ads to see what's coming next.

Assembler  
Memotext Word Processor  
Digitizing Tablet

MANUALS

Memopak  
provide  
substantial  
documentation  
for all their  
products, in the  
form of individual  
booklets for each  
Memopak. In  
addition to basic information on how to use  
your Memopak the booklets contain program  
examples and material on the internal  
architecture and functions plus our guarantee  
for use in the unlikely event of any  
malfunction.



# WHY CHOOSE MEMOTECH?

*Memotech systems are used not just in the home and in small businesses, but also in larger organisations where localised, efficient data handling is required.*

- **reliable and efficient in operation**
- **compact, stylish, high quality extruded aluminium casing**
- **forward compatibility with Memotech products**
- **extensive documentation with sample programs**
- **flexibility of operation modes**
- **full guarantees/refunds or replacement**
- **exchange options (16K)**
- **full after-sales service**
- **efficient quality control**
- **efficient heat sink**

## INSTRUCTION MANUALS

Memotech provide substantial documentation for all their products, in the form of individual booklets for each Memopak. In

addition to basic information on how to use your Memopak the booklets contain program examples and material on the internal architecture and functions plus our guarantee for use in the unlikely event of any malfunction.



## FURTHER INFORMATION ON MEMOTECH PRODUCTS

Memotech produce a range of add-on Memopaks for the ZX81. We will be pleased to send information sheets on any of the following packs:

**Please  
Tick**

- |                             |                          |
|-----------------------------|--------------------------|
| ● Plug-in Keyboard          | <input type="checkbox"/> |
| ● 64K RAM PACK              | <input type="checkbox"/> |
| ● 32K RAM PACK              | <input type="checkbox"/> |
| ● 16K RAM PACK              | <input type="checkbox"/> |
| ● Hi-Res Graphics           | <input type="checkbox"/> |
| ● Centronics Type Interface | <input type="checkbox"/> |
| ● MEMOCALC Spread Sheet     | <input type="checkbox"/> |
| ● RS232 Interface           | <input type="checkbox"/> |

## COMING SOON

**Assembler**

**Memotext Word Processor**

**Digitising Tablet**

We'll let you know, via our Press advertisements, when information becomes available on the above products. Please send this page to the address given on the back cover of this leaflet.

Name .....

Address .....

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## WHAT THEY SAY ABOUT MEMOTECH

"a Rolls Royce add-on."

"The new RAMs from **Memotech** are beautifully designed and blend in really well with the styling of the ZX81."

*ZX Computing*  
*Aug/Sept 1982*

"The **Memopak** is undoubtedly the ultimate memory expansion for the Sinclair. Try DIM A (9500)!"

"The documentation is good—answering first-time users' questions. It also gives demonstration programs."

*Syntax*  
*August 1982*

"The 64K version has four switches visible in its rear which allow you to switch out the area between 8K and 16K in the memory map in 4K blocks. This is an excellent idea and I hope other manufacturers will follow this lead . . . Only the **Memotech** allows you to add something between 8K and 16K."

*ZX Computing*  
*Aug/Sept 1982*

"Anyone who wishes to use his Sinclair for any form of data handling—address lists, stock control, etc., would very quickly run out of space . . . the **Memotech** 64K RAM is designed to overcome this problem."

*Hobby Electronics*  
*June 1982*

"...there's no denying that the **Memotechs** are the best-styled and the best-made RAM packs on the market."

*ZX Computing*  
*Aug/Sept 1982*

# Guarantee

April 1982

This warranty applies to products purchased outside the United States.

This product is guaranteed free from defects in material and workmanship for a period of six months from the date of purchase subject to the following conditions:

- 1. The guarantee does not cover any damage caused through neglect, incorrect adjustment, accident or misuse and will be invalidated if the product is modified or altered in any way or repaired by anyone other than Memotech Limited.**
- 2. Claims under this guarantee must be made by sending the product (well packed preferably in its original packing) to the address below.**

Memotech Limited,  
Station Lane,  
Witney, Oxon.  
OX8 6BX.

England.

Telephone: (0993) 2977

Telex: 83372 MEMTEC G

This Guarantee does not affect the customer's statutory rights.

**Model: Keyboard and Buffer Pack**

**Serial No: (if any)** .....

**Date of Purchase:** .....

**Owner's Name:** .....

**Owner's Address:** .....

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**Method of Purchase\*** .....

**Place of Purchase** .....

**\*Please enclose evidence of purchase (receipt etc.) as without this we will be unable to give a refund or replace this item.**



# Guarantee

*April 1982*

This warranty applies only to products purchased in the United States.

This product is guaranteed free from defects in material and workmanship for a period of six months from the date of purchase subject to the following conditions:

- 1. The guarantee does not cover any damage caused through neglect, incorrect adjustment, accident or misuse and will be invalidated if the product is modified or altered in any way or repaired by anyone other than Memotech Corporation.**
- 2. Claims under this guarantee must be made by sending the product (well packed preferably in its original packing) to the address below.**
- 3. This guarantee is valid only in the case of a purchaser resident in the United States.**

Memotech Corp,  
7550 West Yale Avenue,  
Suite 200,  
Denver,  
Colorado 80227.

**Model: Keyboard and Buffer Pack.**

**Serial No: (if any) .....**

**Date of Purchase: .....**

**Owner's Name: .....**

**Owner's Address: .....**

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**Method of Purchase\* .....**

**Place of Purchase .....**

**\*Please enclose evidence of purchase (receipt etc.) as without this we will be unable to give a refund or replace this item.**

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**MEMOTECH LIMITED,  
Station Lane,  
Witney, Oxon.  
OX8 6BX. England.  
Phone: (0993) 2977  
Telex: 83372 MEMTEC G**

**MEMOTECH CORP.,  
7550 W. YALE AVE., #200,  
Denver, Colo 80227.  
Phone: (303) 986 1516  
Twx: 9103202917.**